

ABSTRACT

There is provided an adaptive transceiver device which estimates a path arrival direction of a desired wave signal by using a reception antenna weight of a k-th user adaptive reception unit using a control method based on the minimum mean square error (MMSE) standards and which generates a transmission antenna weight on the basis of the path arrival direction. The adaptive transceiver device is characterized in that, in reception, a directivity pattern for suppressing interference caused by another user or a multi-path is formed, an arrival direction of a path is estimated from the reception antenna weight, and a transmission direction is predicted from the estimated arrival direction to generate a transmission antenna weight, and in transmission, a directivity pattern for decreasing interference to another user is formed and transmitted.